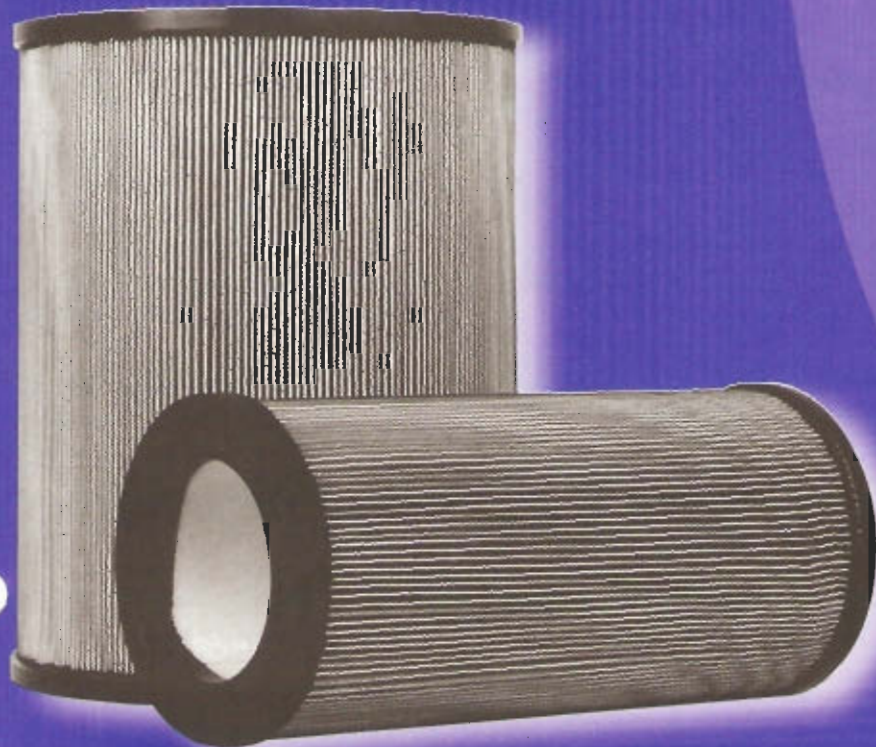




## Coalescing Gas Filter

- Remove dirt particles and liquid condensation from natural gas pipelines
- Housings are designed in accordance with ASME Section VIII
- Constructed from carbon steel or stainless steel
- Custom applications and designs in regard to flange connections, high pressures, and flows available.

The design is an "Out to In" flow which will handle the following:  
*Compressed Air, Natural Gas, Ammonia, Argon, Helium, Hydrogen, Methane, Nitrogen and others.*



- Multi-layer design
- Standard design 3 micron coalescing filter for liquid and particulate removal
- Smaller micron filter rating available upon request
- Large, pleated surface area
- Special stackable design of the elements will not collapse and travel downstream with differential pressure of up to 150 psi.

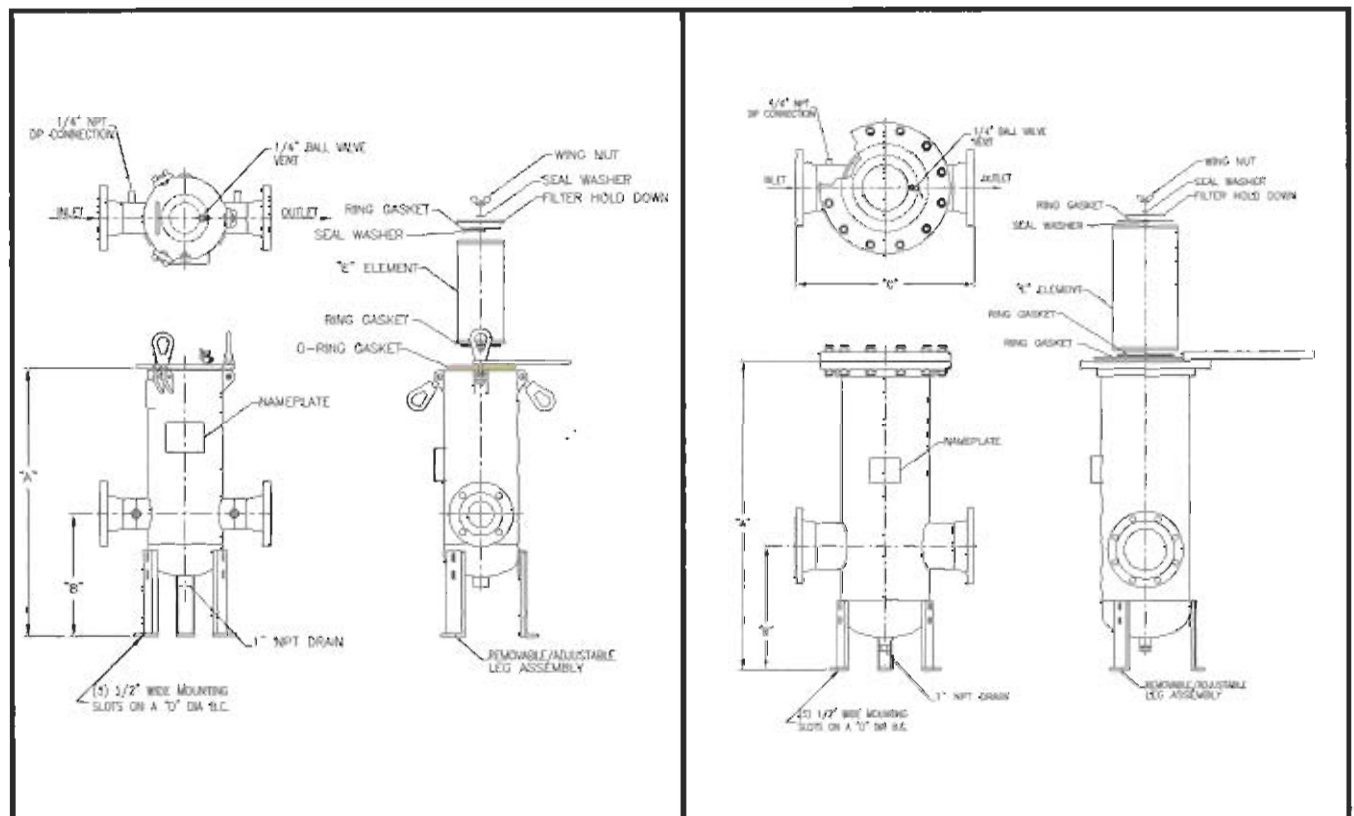
# LOW PRESSURE FILTER SPECIFICATIONS

Standard Housing Construction: Carbon Steel or Stainless Steel  
 Maximum Working Pressure: 150 psig @ 150 °F  
 Consult Factory for High Pressure or Special Connection Requirements

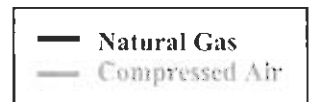
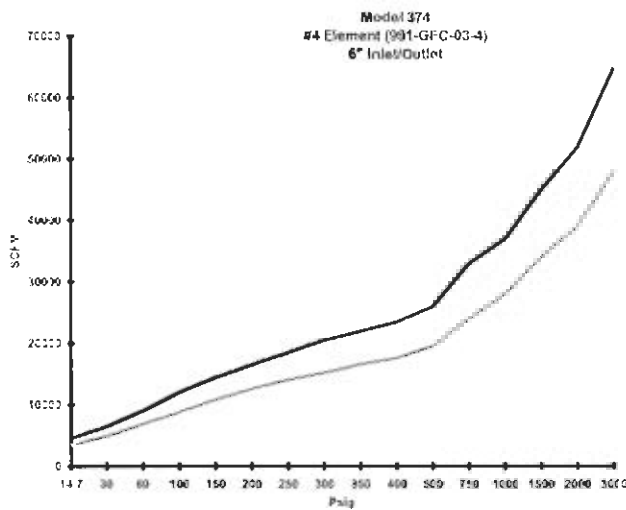
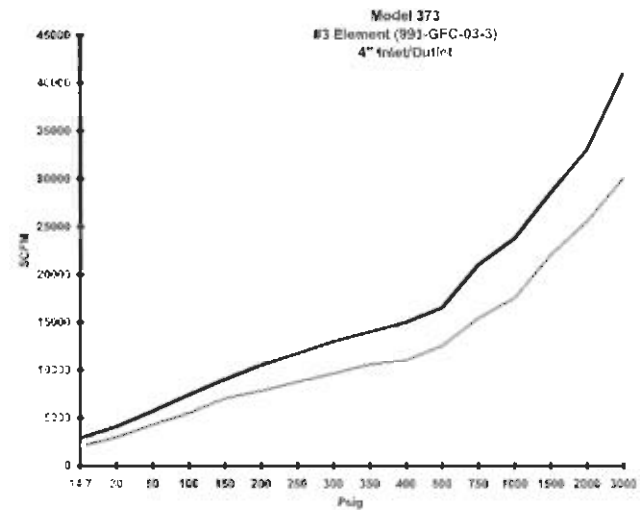
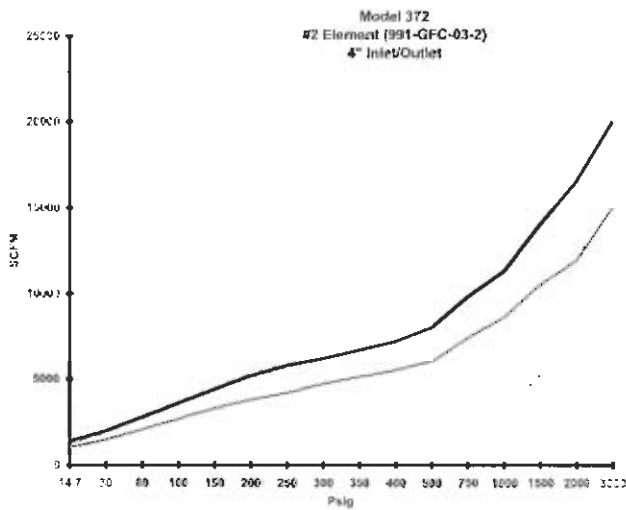
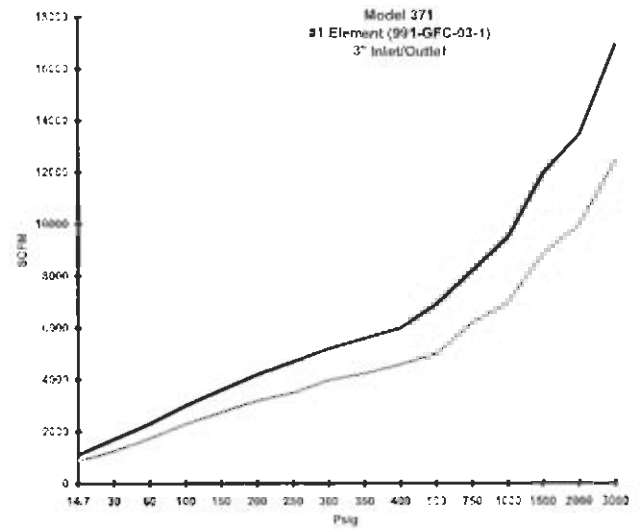
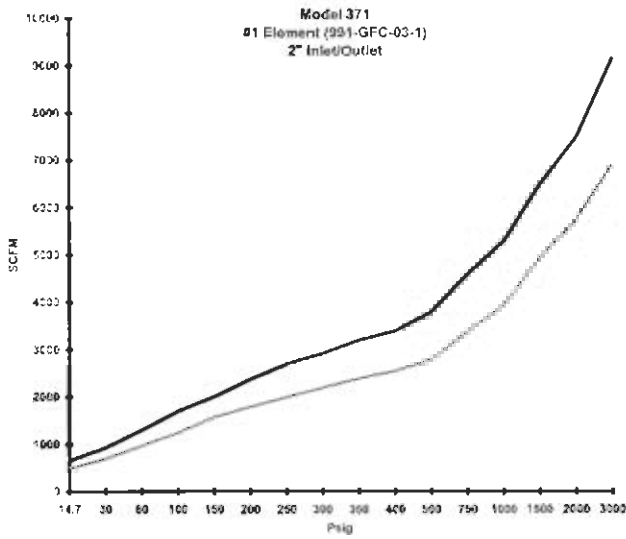
Model Number	Connection	A	B	C	D	E	Housing Diameter
371-015-08	1-1/2"-150# R.F.	31"	14"	20"	11.25"	GFC-1	8"
371-02-08	2"-150# R.F.	31"	14"	20"	11.25"	GFC-1	8"
371-03-08	3"-150# R.F.	31"	14"	20"	11.25"	GFC-1	8"
374-04-012	4"-150# R.F.	45"	18"	26"	16"	GFC-4	12"
374-05-012	5"-150# R.F.	45"	18"	26"	16"	GFC-4	12"
374-06-012	6"-150# R.F.	45"	18"	26"	16"	GFC-4	12"

## 371 SERIES

## 374 SERIES



- \* Dimensions subject to change without notice, apply for certified drawings
- \* Vent and/or drain connections can either be NPT as shown above or standard ANSI flanges. (Please advise when submitting RFQ)
- \* On the 371 Series, the swing bolt closure can be substituted with an ANSI style bolted closure (See 374 Series)
- \* The Series 374 is available in 150#, 300#, and 600# ANSI ratings.
- \* Custom applications and designs are available upon request.



- Elements are 3 micron
- Gas Flow @ Pressure for 1 psid
- Free Gas measured at 14.7 Psia and 60°F
- TM's design criteria is to design with the unit in the clean condition to be one psid or less. This is shown when you plot lines on the chart and they meet to the right of the charted lines for the gas in question. If the point is to the left, use the next larger size or contact the factory for the calculated pressure drop. Other gases can be used with this coalescing gas filter. Please contact the factory for flow and design information.
- The pressure drop chart for natural gas was calculated with a molecular weight of 16.04 and a specific gravity of 0.555.

# FLUID ENGINEERING

AN EMERGENCY RESPONSE COMPANY A DIVISION OF ICI INDUSTRIAL SUPPLY INC.  
 1432 WALNUT STREET • BRIDLE, PA 16502 USA • TEL: (814) 453-5014 • FAX: (814) 452-6573  
 Home Page: <http://www.fluideng.com> • E-Mail: [fluideng@fluideng.com](mailto:fluideng@fluideng.com)

## Gas Filtration & Conditioning Division

### GFC Series Filter Element Technical Report Materials of Construction

<u>COMPONENT</u>	<u>MATERIAL</u>	<u>PURPOSE</u>
End Caps:	Polyurethane	Rigidity, Sealing Surface
Inner Core:	Sintered Polyethylene Tube	Rigidity, Final Gas Polishing
Filter Media	Micro Borosilicated Glass	Coalescing, Particulate Retention
Substrate	Spun Bonded Polyester	Substrate, Particulate Retention

Inner Core  
Substrate  
Filter Media  
End Cap  
Pleated Mesh Screen (Re-enforcement)

#### FILTER MEDIA ANALYSIS

Beta = 75 efficiency:	3 micron absolute	Solids Holding Cap.:	5.4 mg/cm <sup>2</sup> (0.0002 oz./15.50 sq in)
Basic Weight:	78 gm/m <sup>2</sup> (0.25 oz. per.sq ft)	Frazier L/sec:	1.9 (30.1 GPM)*
Calliper (Thickness):	0.4 mm (0.016 in.)	Mean Flow Pore Size:	6.1**
DOP Penetration % 0.3 micron Particle @ 32 l/min/cm <sup>2</sup> :	4.00%	Resistance in mm @ 32 l/min/100 cm <sup>2</sup> :	15mm (0.59 in. @ 8.5 GPM/15-5 sq in)

#### Efficiencies of Element (In constructed form)

Liquid Removal	99.9% > 3 Micron, 99.5% < 3 Micron
Solids Removal	99.9% > 3 micron, 99.5% 0.5 to 3. Micron

\* Frazier Test: The volume of air, in CFM, that can flow through 1 sq.ft of media at 0.5 W.G. pressure drop (or l/sec/m<sup>2</sup> @ 20mm H<sub>2</sub>O).

\*\* As determined by a Coulter Porometer

## Gas Filtration & Conditioning Division

### *Introducing the latest in gas filter technology!*

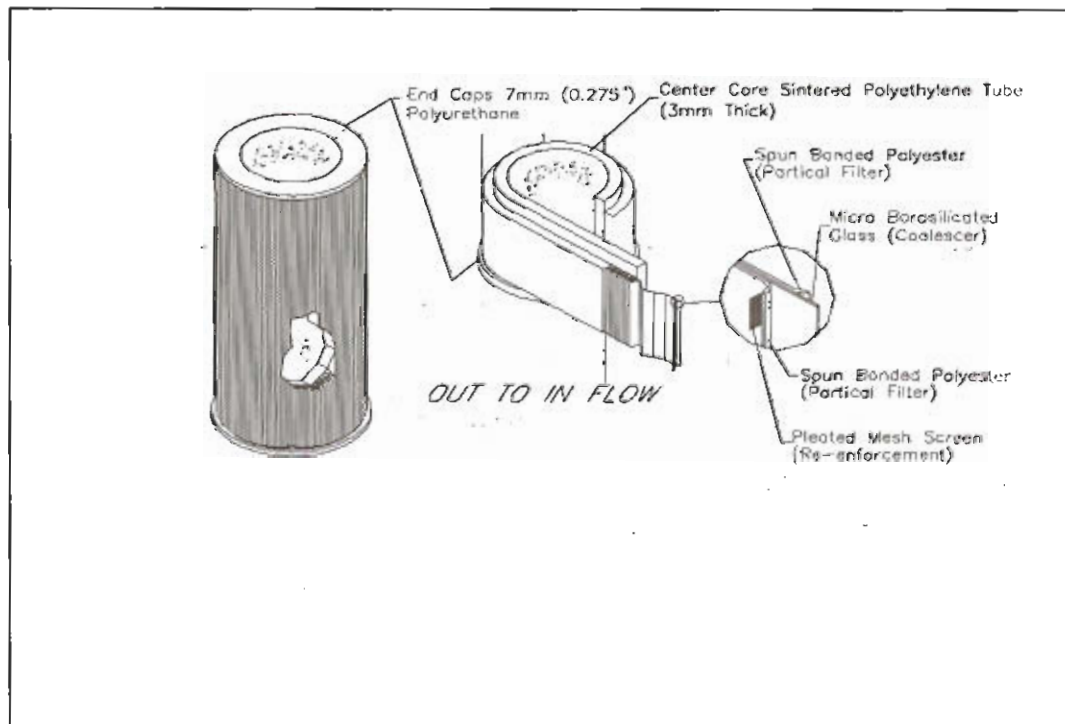
1. **Surface area:** Typically 10 to 15 times greater than what is being offered!
2. **Dirt holding capacity:** The pleated design allows it to hold 20 times a greater capacity!
3. **Radial Velocity :** Less than 0.5 ft/sec. This is a critical factor in the life expectancy of the coalescing element\*
4. **High DP Allowable:** The element internal support of the filter housing is designed for 150 psid\*\*
5. **Construction:** Being made of 100% poly materials (which protect the Borosilicated Glass from particles) this element can be cleaned and re-used.\*\*\*
6. **Life Expectancy:** Because of all of these inherent benefits the operating life of the element will be 3 to 6 times longer than other elements on the market

\*This is the velocity where the air/gas is impacting on the surface area of the Borosilicated Glass.

\*\* We recommend the elements be changed after a differential pressure of 15 psi is reached

\*\*\* Recommended method of cleaning is ultrasonic bath (contact factory for vendor recommendation)

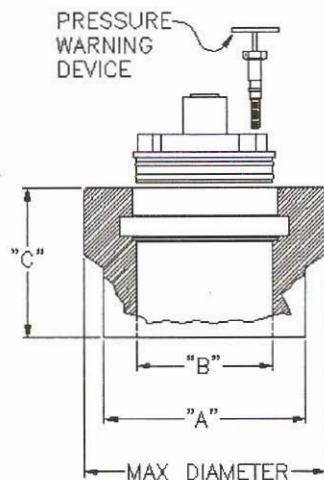
ELEMENT NO	OD IN / MM	ID IN / MM	LENGTH IN / MM	SURFACE AREA Sq.Ft / Sq. M
991-GFC-03-1	5.53 / 140.5	3.53 / 89.7	12.0 / 304.8	20.0 / 2.01
991-GFC-03-2	5.53 / 140.5	3.53 / 89.7	18.0 / 457.2	30.1 / 3.02
991-GFC-03-3	9.56 / 243.0	6.65 / 169.0	12.0 / 304.8	52.4 / 5.26
991-GFC-03-4	9.56 / 243.0	6.65 / 169.0	18.0 / 457.2	78.7 / 7.90



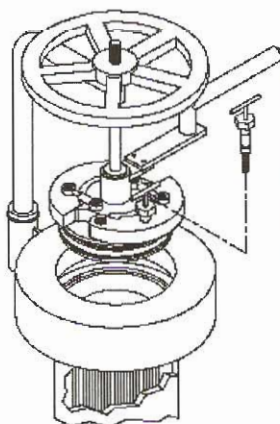
## GAS FILTRATION AND CONDITIONING DIVISION

### POSI-SEALOC II QUICK OPEN CLOSURE PATENT PENDING

- STANDARD CLOSURE IS DESIGNED FOR 1480 PSIG @100° F (ANSI 600# & 300#)
- STANDARD CLOSURE SUPPLIED WITH DUAL O-RING SEALS (BUNA-N), OTHER O-RING MATERIAL AVAILABLE (SEE CHART)
- ALL UNITS SUPPLIED WITH PRESSURE WARNING DEVICE (LOCK AND DEPRESSURIZATION SAFETY BOLT)
- 8" AND 12" SIZES SUPPLIED WITH STANDARD DAVIT
- DESIGNED TO TAKE EXTERNAL LOAD
- NO LOCKING ARMS TO BEND OR BREAK
- NO CHANCE OF O-RING EXTRUSION
- LOCKING CLAMPS HAVE NO EFFECT ON SEAL



O-Ring Seal Materials	
Buna-N	-60° to 225° F (-51° to 107° C)
EPDM	-40° to 300° F (-40 to 149° C)
Viton®	-20° to 400° F (-28° to 204° C)
Silicon	-100° to 500° F (-73 to 260° C)



Model 330	A	Bore Size B	C	D	Pipe Schedule (See Notes)
8 x 8	8 5/8"	7 1/4"	6 3/4"	12 7/8"	8"
10 x 8	10 3/4"	7 1/4"	6 3/4"	12 7/8"	10"
12 x 8	12 3/4"	7 1/4"	6 3/4"	12 7/8"	12"
12 x 12	12 3/4"	10 5/8"	7"	14 7/8"	12"
14 x 12	14"	10 5/8"	7"	14 7/8"	14"
14 x 16	14"	12"	7"	18"	14"
16 x 16	16"	12"	7"	18"	16"
18 x 20	18"	15 5/8"	8"	22"	18"
20 x 20	20"	15 5/8"	8"	22"	20"
22 x 24	22"	20 7/8"	8"	26"	22"
24 x 24	24"	20 7/8"	8"	26"	24"
26 x 24	26"	20 7/8"	8"	26"	26"

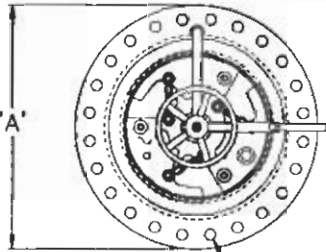
**NOTES:**

- LARGER SIZE AND SPECIFIC BORE SIZE ON APPLICATION
- STANDARD MATERIAL OF CONSTRUCTION: CARBON STEEL
- OTHER MATERIAL AVAILABLE
- PIPE SCHEDULE TO BE SPECIFIED
- DESIGN IN ACCORDANCE TO ASME VIII DIV I
  - CLOSURE HOUSING - SA106 GR B OR SA-105
  - COVER & LOCKING CAMS - SA516 G70 AND CADMIUM PLATED

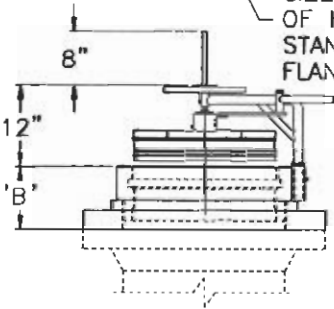
## GAS FILTRATION AND CONDITIONING DIVISION

### Series 335 Retrofit ANSI Flanges with Posi-Sealoc II™ Quick Opening Closure

Patent pending



BOLT PATTERN,  
 SIZE & QUANTITY  
 OF HOLES PER  
 STANDARD ANSI  
 FLANGE



- Standard closure is designed for 1480 PSIG @100° F (ANSI 300# & 600#)
- Standard closure supplied with dual O-ring seals (BUNA-N), other o-ring material available (see chart)
- All units supplied with pressure warning device (Lock and depressurization safety bolt)
- 8" and 12" sizes supplied with davit as standard
- No locking arms to bend or break
- No chance of O-ring extrusion
- Locking clamps have no effect on seal

Part No.	Flange Compatibility	ANSI Class	A	B	Weight
<b>335-081-3</b>	8" - 300#	300#	15" 381 mm	6 3/8" 168 mm	325 lbs 147 kg
<b>335-081-6</b>	8" - 600#	600#	16 1/2" 419 mm	7 1/2" 191 mm	370 lbs 168 kg
<b>335-102-3</b>	10" - 300#	300#	17 1/2" 445 mm	7 3/4" 197 mm	394 lbs 179 kg
<b>335-102-6</b>	10" - 600#	600#	20" 508 mm	7 7/8" 200 mm	450 lbs 204 kg
<b>335-122-3</b>	12" - 300#	300#	20" 508 mm	7 3/4" 197 mm	470 lbs 213 kg
<b>335-122-6</b>	12" - 600#	600#	22" 559 mm	8 1/2" 216 mm	570 lbs 259 kg
<b>335-205-3</b>	20" - 300#	300#	30 1/2" 775 mm	8 3/4" 222 mm	1505 lbs 683 kg
<b>335-205-6</b>	20" - 600#	600#	32" 813 mm	10 1/4" 260 mm	1791 lbs 812 kg
<b>335-245-3</b>	24" - 300#	300#	36" 914 mm	9 1/4" 235 mm	1670 lbs 757 kg
<b>335-245-6</b>	24" - 600#	600#	37" 940 mm	10 3/4" 273 mm	2055 lbs 932 kg

O-Ring Seal Materials	
Buna-N	-60° to 225° F (-51° to 107° C)
EPDM	-40° to 300° F (-40 to 149° C)
Viton®	-20° to 400° F (-28° to 204° C)
Silicon	-100° to 500° F (-73 to 260° C)

- Note:
- Larger size and specific bore on application
  - Standard material of construction: carbon steel, other materials available
  - Dimensions subject to change
  - Contact sales dept. for custom dimensions
  - Design in accordance to ASME Sec. VIII Div I
    - \* Closure housing-SA106 Gr B or SA105
    - \* Cover & Locking cams-SA516-70 and cadmium plated